§ 436.217 Film-coat rupture test.

(a) *Immersion fluid.* Dilute 6.0 milliliters of hydrochloric acid to 1,000 milliliters with water. During the performance of the test maintain the immersion fluid at a temperature of 37±0.5 °C by using a thermostatically controlled water bath.

(b) *Immersion vessel.* Use a suitable vessel, such as a 1-liter beaker.

(c) *Operation.* Add 750 milliliters of immersion fluid to the immersion vessel.

(d) *Procedure.* Drop a tablet into the immersion fluid and record the time for the tablet coat to rupture. Repeat the test with a further 19 tablets, testing not more than 10 tablets with a given volume of immersion fluid.

(e) *Evaluation.* The tablets pass the film-coat rupture test if the mean coat rupture time does not exceed 20 seconds and not more than 2 tablets have a coat rupture time exceeding 40 seconds.

[52 FR 42432, Nov. 5, 1987]

Subpart F—Chemical Tests for Specific Antibiotics

§ 436.300 Polarimetric assay of carbenicillin indanyl sodium.

(a) *Equipment.* Polarimeter capable of measuring optical rotatory activity at 365 nanometers: Perkin-Elmer Model 141 or equivalent, with a suitable 1-decimeter polarimeter tube.

(b) *Reagents*—(1) *4-methyl-2-pentanone.* Meets ACS specifications.

(2) *Phosphate-citrate buffer.* Dissolve 61.0 grams of anhydrous disodium phosphate and 11.0 grams of citric acid in 950 milliliters of distilled water. Adjust the pH to 6.0 with 6*N* hydrochloric acid. Dilute to 1,000 milliliters with distilled water.

(c) *Preparation of carbenicillin indanyl sodium sample and working standard solutions.* Accurately weigh approximately 125 milligrams of the carbenicillin indanyl sodium sample or working standard into a 25-milliliter volumetric flask. Dissolve and dilute to volume with distilled water. Transfer a 5-milliliter aliquot to a 50-milliliter glass-stoppered centrifuge tube. Add 15 milliliters of the phosphate-citrate buffer and 20 milliliters of 4-methyl-2-pentanone; stopper and shake the tube for 10 seconds. Centrifuge at 2,000 revolutions per minute for 10 minutes to separate the phases. Remove about 15 milliliters of the upper (4-methyl-2-pentanone solvent) phase and proceed as directed in paragraph (e) of this section.

(d) *Preparation of the blank.* Place a 5-milliliter aliquot of distilled water into a 50-milliliter glass-stoppered centrifuge tube, add 15 milliliters of phosphate-citrate buffer and 20 milliliters of 4-methyl-2-pentanone; stopper and shake the tube for 10 seconds. Centrifuge at 2,000 revolutions per minute for 10 minutes to separate the phases. Remove about 15 milliliters of the upper phase and proceed as directed in paragraph (e) of this section.

(e) *Procedure.* Fill the polarimeter tube with the blank solution prepared as described in paragraph (d) of this section. Place the tube in the polarimeter. Adjust the polarimeter to zero rotation using a light source with a wavelength of 365 nanometers. Use the same procedure to determine the optical rotation of both the sample solution and the working standard solution prepared as directed in paragraph (c) of this section.

(f) *Calculations.* Calculate the carbenicillin content (potency) of the sample on an anhydrous basis as follows:

$$\text{Micrograms of carbenicillin per milligram of sample} = \frac{\text{Degrees of rotation of sample solution} \times \text{weight of working standard} \times 100 \times \text{micrograms of carbenicillin in each milligram of the working standard}}{\text{Degrees of rotation of working standard solution} \times \text{weight of sample} \times (100 - m)}$$